

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A ~~nucleic acid stretch~~ method for ~~for~~ stretching the following a single-stranded nucleic acid, comprising:

providing a reaction detecting section including a first electrode, a second electrode, and a reaction well sandwiched between the first electrode and the second electrode, the reaction well containing an aqueous solution of pH 5 to 11, and the first electrode having a surface area smaller than that of the second electrode;

adding the single-stranded nucleic acid in a coil form to the aqueous solution;
and

applying an ac voltage of a high frequency to the first electrode and the second electrode, thereby forming an ac electric field in the aqueous solution to stretch the single-stranded nucleic acid. ~~(1) or (2) by causing an ac electric field of a high frequency to act on said single-stranded nucleic acid (1) or (2): (1) a single-stranded nucleic acid existing in a free form in pure water or an aqueous solution of pH 5 to 11, or (2) a single-stranded nucleic acid existing in a form immobilized on one or both of opposing electrodes arranged facing said aqueous solution.~~

2. (Currently Amended) The ~~nucleic acid stretch~~ method according to claim 1, wherein said ~~high~~ the high frequency is ~~has a frequency of 500 kHz or higher, and a~~

~~voltage is applied to give an electric field strength of~~ an amplitude of the ac electric field
is 1.2 V/μm or higher.

3. (Currently Amended) The ~~nucleic acid stretch~~ method according to claim 1,
wherein ~~a distance between said opposing electrodes~~ the first electrode and the second
electrode are separated by a distance such that no convection is induced in the
aqueous solution. ~~is set at 40 μm or shorter.~~

4. (Currently Amended) The ~~nucleic acid stretch~~ method according to claim 1,
~~wherein said stretch of said~~ further comprising migrating the single-stranded nucleic
acid toward the first electrode ~~is effected~~ by dielectrophoresis.

5. (Withdrawn) A nucleic acid stretch system, characterized in that hybridization is
conducted by using, as one of complementary strands, a single-stranded nucleic acid
stretched by a method according to claim 1.

6. (Withdrawn) A nucleic acid stretch system provided at least with a reaction well
capable of storing an aqueous solution therein and a means for forming a high-
frequency ac electric field in said reaction well, characterized in that a single-stranded
nucleic acid existing in said reaction well is stretched under an action of said high-
frequency ac electric field.

7. (Withdrawn) The nucleic acid stretch system according to claim 6, wherein said
reaction well is provided with at least a pair of opposing electrode, and said single-

stranded nucleic acid is immobilized at an end thereof on a surface or surfaces of one or both of said opposing electrodes.

8. (Withdrawn) The nucleic acid stretch system according to claim 7, wherein a distance between said opposing electrodes is 40 μm or shorter.

9. (Withdrawn) A nucleic acid stretch system, characterized in that using an stretched single-stranded nucleic acid as one of complementary strands, hybridization is conducted in said reaction well as described in claim 6.

10. (Withdrawn) A DNA chip characterized by use of a means for stretching a single-stranded nucleic acid, which exists in a free or immobilized form in an aqueous solution of pH 5 to 11, under an action of a high-frequency ac electric field applied to a reaction well with pure water or said aqueous solution retained therein.

11. (New) The method of claim 1, wherein adding the single-stranded nucleic acid comprises fixing an end of the single-stranded nucleic acid to the first electrode.

12. (New) The method of claim 1, wherein the aqueous solution comprises pure water.

13. (New) The method of claim 3, wherein the distance is 40 μm or less.